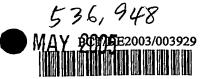
Translation

PATENT COOPERATION TREATY



PCT

10/536948

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference V51035WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)							
International application No.	International filing date (day/month/year) Priority of		Priority date (day/month/year)					
PCT/DE2003/003929	27 November 2003 (27.	.11.2003)	29 November 2002 (29.11.2002)					
International Patent Classification (IPC) or national classification and IPC F16J 1/20								
Applicant MAHLE GMBH								
 This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 								
2. This REPORT consists of a total of sheets, including this cover sheet.								
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).								
These annexes consist of a total of sheets.								
This report contains indications relating to the following items:								
I Basis of the report								
II Priority	II Priority							
III Non-establishment	of opinion with regard to novel	ty, inventive s	tep and industrial applicability					
IV Lack of unity of in			ti de- on industrial applicability:					
V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement								
VI Certain documents cited								
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	VII Certain defects in the international application							
VIII Certain observations on the international application								
Date of submission of the demand	Date	Date of completion of this report						
24 June 2004 (24.06	.2004)	04 October 2004 (04.10.2004)						
Name and mailing address of the IPEA/EF	Auth	Authorized officer						
Facsimile No.	Teler	phone No.						

∠INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/003929

	s of the rep	
1. With	regard to	the elements of the international application:*
		mational application as originally filed
	the desc	
	pages	1.7
	pages	, 0.18.11.11
	pages	, filed with the letter of
	the claim	
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	pages _	
	pages _	, as amended (together with any statement under Article 19
1	pages	, filed with the demand
K 7	-	, filed with the letter of
M	the draw	ings:
	pages _	1/2-2/2 , as originally filed
	pages _	, filed with the demand
	pages _	, filed with the letter of
ti	he sequen	ce listing part of the description:
	pages _	•
	pages _	, as originally filed
	pages	, filed with the letter of, filed with the demand
These	the langu the langu the langu or 55.3). regard to ninary exan contained filed toge furnished furnished The state internation	o any nucleotide and/or amino acid sequence disclosed in the international application, the international amination was carried out on the basis of the sequence listing: d in the international application in written form. ether with the international application in computer readable form. I subsequently to this Authority in written form. I subsequently to this Authority in computer readable form. ement that the subsequently furnished written sequence listing does not go beyond the disclosure in the onal application as filed has been furnished.
s. To b * Replace in this and 70.	the the the the This report the the the the the the the the the th	adments have resulted in the cancellation of: the description, pages the claims, Nos that been established as if (some of) the amendments had not been made, since they have been considered to go a disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** the stablished as if (some of) the amendments had not been made, since they have been considered to go a disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** the stablished as if (some of) the amendments had not been made, since they have been considered to go a disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** the stablished as if (some of) the amendments had not been made, since they have been considered to go a disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** the stablished as if (some of) the amendments had not been made, since they have been considered to go a disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** the stablished as if (some of) the amendments had not been made, since they have been considered to go a disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** the stablished as if (some of) the amendments had not been made, since they have been considered to go a disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**
	"Machiene	sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE 03/03929

v.	 Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement 							
		ng such statement						
1.	Statement							
	Novelty (N)	Claims	1-6	YES				
		Claims		NO				
	Inventive step (IS)	Claims	1-6	YES				
		Claims		NO				
	Industrial applicability (IA)	Claims	1-6	YES				
-		Claims		NO				

2. Citations and explanations

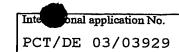
1. The closest prior art, EP 0095052, describes a pin boss for an internal combustion engine that has an inside face into which is formed a groove-like recess that is open at both ends and parallel to the pin's longitudinal axis.

The problem addressed by the invention is to improve the lubricating properties of such a boss not only to ensure pin lubrication in normal operation, but also to provide for good cold-start and emergency properties of the piston pin.

The problem is solved by the features of claim 1, in particular by the arrangement of an outlet to the outside of the piston in the transverse groove parallel to the longitudinal axis and by a circulation groove, with oil feed bore, crossing the transverse groove.

The prior art offers no suggestion either of the proposed solution, as none of the searched documents has the above-mentioned features, nor of the targeted problems of lubrication on cold start or

INTERNATIONAL PRELIMINARY EXAMINATION REPORT



emergency operating conditions.

Hence, the designation "of particular relevance" in the search report is untenable.

2. Independent claim 1 has not been properly written in the two-part form and the description of the closest prior art contains a different wording from that of claim 1, and so it is not immediately clear to the skilled person active in this field what contribution the invention makes over the prior art.